

Title (en)
Electromagnetic actuator

Title (de)
Elektromagnetischer Aktor

Title (fr)
Actionneur électromagnétique

Publication
EP 2600361 A1 20130605 (EN)

Application
EP 11191035 A 20111129

Priority
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Abstract (en)
The invention relates to an electromagnetic actuator for operating at least one movable contact of a switch into a switched-on position or a switched-off position, wherein the electromagnetic actuator comprises: - a static pole body; - a movable pole body movable relative to the static pole body; - a first magnetic circuit comprising a first coil for making the movable pole body and the fixed pole body move towards each other to a switched-on position and a second coil for making the movable pole body and the fixed pole body move away from each other to a switched-off position; and - a second magnetic circuit comprising a permanent magnet and a retaining plate to keep the static pole body and the movable pole body in the switched-on position; - first spring means for urging the static pole body and the movable body away from each other; wherein the first and second magnetic circuit are arranged concentrically.

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Citation (applicant)
WO 2004100198 A1 20041118 - EATON ELECTRIC NV [NL], et al

Citation (search report)
• [X] JP 2002270423 A 20020920 - TOSHIBA CORP
• [X] JP 2007103243 A 20070419 - TOSHIBA CORP
• [X] JP 2007073829 A 20070322 - TOSHIBA CORP
• [X] JP 2007073580 A 20070322 - TOSHIBA CORP
• [X] EP 1826784 A2 20070829 - TOSHIBA KK [JP]
• [A] EP 2330609 A1 20110608 - ABB TECHNOLOGY AG [CH]
• [AD] WO 2004100198 A1 20041118 - EATON ELECTRIC NV [NL], et al

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